WHAT IS CLAIMED IS:

1. A method for creating an image model in an image identification system, the method comprising:

obtaining a raw scan of an image;

preprocessing the raw scan to obtain a monochrome image;

creating a wire frame image based on the monochrome image; and

locating and qualifying a plurality of distinguishing characteristics of the wire frame image.

2. The method of claim 1, further comprising:

generating a slope table based on the monochrome image.

3. The method of claim 2, further comprising:

generating a statistical representation; and

accessing and using the statistical representation to determine quality classifications based on the raw scan image.

4. The method of claim 3, further comprising:

accessing and using the statistical representation to determine additional classifications based on brightness levels within the raw scan of the image.

5. The method of claim 2, wherein generating said slope table comprises:

dividing the monochrome image into a plurality of pixel grids;

performing a contour trace through said
plurality of pixel grids and recording a
set of corresponding data in a raw slope
data table;

utilizing said set of corresponding data to
calculate a slope value for each pixel
grid; and

recording said slope value in the slope table.

6. The method of claim 5, wherein dividing the monochrome image into a plurality of pixel grids comprises:

dividing the monochrome image into an array of n
x n pixel grids, where n > 1.

7. The method of claim 1, wherein obtaining a raw scan of an image comprises obtaining a raw scan of a fingerprint.

8. The method of claim 7, wherein locating and qualifying a plurality of distinguishing characteristics of the wire frame image comprises locating and qualifying a plurality of fingerprint ridge characteristics of the wire frame image.

9. The method of claim 8, wherein locating and qualifying a plurality of fingerprint ridge characteristics of the wire frame image comprises locating and qualifying a plurality of bifurcations.

10. The method of claim 8, wherein locating and qualifying a plurality of fingerprint ridge characteristics of the wire frame image comprises locating and qualifying a plurality of rods.

11.   The method of claim 8, wherein locating and qualifying a plurality of fingerprint ridge characteristics of the wire frame image comprises locating and qualifying a plurality of ridge segments not used by bifurcations or rods.

12.   The method of claim 8, wherein locating and qualifying a plurality of fingerprint ridge characteristics of the wire-frame image comprises locating and qualifying a plurality of vector segments associated with a plurality of bifurcations and a plurality of rods.

13.   The method of claim 1, wherein the raw scan includes an aspect ratio and preprocessing the raw scan to obtain a monochrome image comprises:

> creating a corrected raw scan by modifying the aspect ratio to a target value; and
>
> creating an intermediate image by selecting a pixel value for each pixel in the intermediate image based on an averaging of a corresponding pixel array taken from the corrected raw scan.

14.   The method of claim 13, wherein preprocessing further comprises:

> creating an enhanced image by scanning the intermediate image for a plurality of edges and emphasizing said plurality of edges.

15.   The method of claim 14, wherein preprocessing further comprises:

reducing said enhanced image to a monochrome
image.

16. The method of claim 15, wherein preprocessing
further comprises:

producing a filled monochrome image by locating
and filling a plurality of irregularities
in the monochrome image.

17. The method of claim 16, wherein preprocessing
further comprises:

creating a set of image data element points by
recording identification information
pertaining to the plurality of
irregularities.

18. The method of claim 17, wherein the
identification information includes values pertaining
to a location of each irregularity and a slope value
of a ridge that each irregularity resides on.

19. The method of claim 18, wherein the
identification information further includes values
pertaining to a size measurement of each
irregularity.

20. The method of claim 16, wherein preprocessing
further comprises:

completing the monochrome image by adding and
removing pixels to a plurality of edges
located within the filled monochrome image.

21. The method of claim 13, wherein modifying the
aspect ratio to a target value comprises modifying
the aspect ratio to approximately 1 to 1.

22.   The method of claim 13, wherein the
corresponding pixel array taken from the corrected
raw scan is an n x n pixel array, where n > 1, and
said averaging comprises:

    averaging the n x n pixel array to produce a
        single pixel value to be incorporated into
        the intermediate image.

23.   The method of claim 1, wherein the monochrome
image includes a plurality of edges and creating a
wire frame image comprises:

    identifying a plurality of pixels in the
        monochrome image that form the approximate
        center of said plurality of edges; and

    creating a thinned version of the monochrome
        image by thinning the plurality of edges to
        said plurality of pixels that form the
        approximate center of the plurality of
        edges, wherein thinning converts the
        plurality of edges into a plurality of wire
        frame lines.

24.   The method of claim 23, wherein creating a wire
frame image further comprises:

    removing excess pixels from said plurality of
        wire frame lines.

25.   The method of claim 24, wherein creating a wire
frame image further comprises:

    creating a refined set of wire frame lines by
        identifying and eliminating a plurality of

inconsistent branches from said plurality
of wire frame lines.

26. The method of claim 25, wherein creating a wire
frame image further comprises:

removing excess pixels from the set of refined
wire frame lines.

27. The method of claim 26, wherein creating a wire
frame image further comprises:

creating a further refined set of wire frame
lines by identifying and eliminating a
plurality of inconsistent branches from
said plurality of refined wire frame lines,
said further refined set of wire frame
lines having a plurality of end-points.

28. The method of claim 27, wherein creating a wire
frame image further comprises:

identifying and joining a plurality of end-point
pairs that demonstrate a continuous data
pattern.

29. The method of claim 26, further comprising:

creating an end-point table and a center-point
table by scanning the wire frame lines
contained in the thinned version of the
monochrome image and identifying a
plurality of end-points and a plurality of
center-points, wherein a coordinate
identification is placed in said end-point
table for each of the plurality of end-
points and a coordinate identification is

placed in said center-point table for each

of the plurality of center points.

30. The method of claim 29, wherein eliminating said
plurality of inconsistent branches from said
plurality of wire frame lines comprises:

eliminating a plurality of pixels that

correspond to a particular plurality of

branches that extend from the wire frame

lines and demonstrate a first data pattern.

31. The method of claim 30, wherein eliminating a
plurality of pixels that correspond to a particular
plurality of branches that extend from the wire frame
lines and demonstrate a first data pattern comprises:

eliminating a plurality of pixels that

correspond to a particular plurality of

branches that extend from the wire frame

lines and demonstrate a first data pattern

that includes data elements from said end-

point table and from a slope table.

32. The method of claim 29, further comprising:

re-computing the end-point table and center-

point table after removing excess pixels

from the set of wire frame lines.

33. The method of claim 29, wherein eliminating said
plurality of inconsistent branches from said
plurality of refined wire frame lines comprises:

eliminating a plurality of pixels that

correspond to a particular plurality of

branches that extend from the refined wire

frame lines and demonstrate a second data
pattern.

34. The method of claim 33, wherein eliminating a
plurality of pixels that correspond to a particular
plurality of branches that extend from the refined
wire frame lines and demonstrate a second data
pattern comprises:

eliminating a plurality of pixels that
correspond to a particular plurality of
branches that extend from the refined wire
frame lines and demonstrate a second data
pattern that includes data elements from
said end-point table, said center-point
table and from a slope table.

35. The method of claim 29, further comprising:
re-computing the end-point table and center-
point table after removing excess pixels
from the set of refined wire frame lines.

36. The method of claim 29, wherein identifying and
joining a plurality of end-point pairs that
demonstrate a continuous data pattern comprises:

identifying and joining a plurality of end-point
pairs that demonstrate a continuous data
pattern that includes data elements from
said end-point table and from a slope
table.

37. The method of claim 29, further comprising re-
computing the end-point table and the center-point

table after identifying and joining said plurality of
end-point pairs.

38. A method for preprocessing a raw scan image in
an image identification system, the method
comprising:

    obtaining a raw scan of an image, wherein the
        raw scan includes an aspect ratio;

    creating a corrected raw scan by modifying the
        aspect ratio to a target value; and

    creating an intermediate image by selecting a
        pixel value for each pixel in the
        intermediate image based on an averaging of
        a corresponding pixel array taken from the
        corrected raw scan.

39. The method of claim 38, wherein preprocessing
further comprises:

    creating an enhanced image by scanning the
        intermediate image for a plurality of edges
        and emphasizing said plurality of edges.

40. The method of claim 39, wherein preprocessing
further comprises:

    reducing said enhanced image to a monochrome
        image.

41. The method of claim 40, wherein preprocessing
further comprises:

    producing a filled monochrome image by locating
        and filling a plurality of irregularities
        in the monochrome image.

42. The method of claim 41, wherein preprocessing further comprises:

creating a set of image data element points by recording identification information pertaining to the plurality of irregularities.

43. The method of claim 42, wherein the identification information includes values pertaining to a location of each irregularity and a slope value of a ridge that each irregularity resides on.

44. The method of claim 43, wherein the identification information further includes values pertaining to a size measurement of each irregularity.

45. The method of claim 41, wherein preprocessing further comprises:

completing the monochrome image by adding and removing pixels to a plurality of edges located within the filled monochrome image.

46. The method of claim 38, wherein modifying the aspect ratio to a target value comprises modifying the aspect ratio to approximately 1 to 1.

47. The method of claim 38, wherein the corresponding pixel array taken from the corrected raw scan is an n x n pixel array, where n > 1, and said averaging comprises:

averaging the n x n pixel array to produce a single pixel value to be incorporated into the intermediate image.

48. A method for creating a wire frame image in an image identification system, the method comprising:

obtaining an image scan that includes a plurality of edges;

identifying a plurality of pixels in the image scan that form the approximate center of said plurality of edges; and

creating a thinned version of the monochrome image by thinning the plurality of edges to said plurality of pixels that form the approximate center of the plurality of edges, wherein thinning converts the plurality of edges into a plurality of wire frame lines.

49. The method of claim 48, wherein creating a wire frame image further comprises:

removing excess pixels from said plurality of wire frame lines.

50. The method of claim 49, wherein creating a wire frame image further comprises:

creating a refined set of wire frame lines by identifying and eliminating a plurality of inconsistent branches from said plurality of wire frame lines.

51. The method of claim 50, wherein creating a wire frame image further comprises:

removing excess pixels from the set of refined wire frame lines.

52. The method of claim 51, wherein creating a wire frame image further comprises:

    creating a further refined set of wire frame lines by identifying and eliminating a plurality of inconsistent branches from said plurality of refined wire frame lines, said further refined set of wire frame lines having a plurality of end-points.

53. The method of claim 52, wherein creating a wire frame image further comprises:

    identifying and joining a plurality of end-point pairs that demonstrate a continuous data pattern.

54. The method of claim 53, further comprising:

    creating an end-point table and a center-point table by scanning the wire frame lines contained in the thinned version of the monochrome image and identifying a plurality of end-points and a plurality of center-points, wherein a coordinate identification is placed in said end-point table for each of the plurality of end-points and a coordinate identification is placed in said center-point table for each of the plurality of center points.

55. The method of claim 54, wherein eliminating said plurality of inconsistent branches from said plurality of wire frame lines comprises:

eliminating a plurality of pixels that
corresponds to a particular plurality of
branches that extend from the wire frame
lines and demonstrate a first data pattern.

56. The method of claim 55, wherein eliminating a
plurality of pixels that correspond to a particular
plurality of branches that extend from the wire frame
lines and demonstrate a first data pattern comprises:
eliminating a plurality of pixels that
corresponds to a particular plurality of
branches that extend from the wire frame
lines and demonstrate a first data pattern
that includes data elements from said end-
point table and from a slope table.

57. The method of claim 54, wherein creating a wire
frame image further comprises:
re-computing the end-point table and center-
point table after removing excess pixels
from the set of wire frame lines.

58. The method of claim 54, wherein eliminating said
plurality of inconsistent branches from said
plurality of refined wire frame lines comprises:
eliminating a plurality of pixels that
corresponds to a particular plurality of
branches that extend from the refined wire
frame lines and demonstrate a second data
pattern.

59. The method of claim 58, wherein eliminating a plurality of pixels that correspond to a particular plurality of branches that extend from the refined wire frame lines and demonstrate a second data patter comprises:

    eliminating a plurality of pixels that correspond to a particular plurality of branches that extend from the refined wire frame lines and demonstrate a second data pattern that includes data elements from said end-point table, said center-point table and from a slope table.

60. The method of claim 54, further comprising:
    re-computing the end-point table and center-point table after removing excess pixels from the set of refined wire frame lines.

61. The method of claim 54, wherein identifying and joining a plurality of end-point pairs that demonstrate a continuous data pattern comprises:

    identifying and joining a plurality of end-point pairs that demonstrate a continuous data pattern that includes data elements from said end-point table and from a slope table.

62. The method of claim 54, further comprising:
    re-computing the end-point table and the center-point table after identifying and joining said plurality of end-point pairs.